AF/2178

COMBINED TRANSMITTAL OF APPEAL BRIEF TO THE BOARD OF PATENT APPEALS AND INTERFERENCES & PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. 1.136(a) (Small Entity)	Docket No. 67685/00006

In Re Application Of: **DIMARCO, Chrysanne et al**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
09/502,233	02/11/2000	BASEHOAR, Adam L.	27871	2178	4917

Invention: **A METHOD AND APPARATUS FOR AUTHORING OF CUSTOMIZABLE MULTIMEDIA DOCUMENTS**

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COMMISSIONER FOR PATENTS:

This is a combined Transmittal of Appeal Brief to the Board of Patent Appeals and Interferences and petition under the provisions of 37 CFR 1.136(a) to extend the period for filing an Appeal Brief.

Applicant(s) hereby request(s) an extension of time of (check desired time period):

☐ One month ☐ Two months ☐ Three months ☒ Four months ☐ Five months

from: **September 6, 2004** (*Date*) until: **January 6, 2005** (*Date*)

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Fee for Appeal Brief:	$250.00
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09/502,233	02/11/2000	BASEHOAR, Adam L.	27871	2178	4917

Invention: **A METHOD AND APPARATUS FOR AUTHORING OF CUSTOMIZABLE MULTIMEDIA DOCUMENTS**

TO THE COMMISSIONER FOR PATENTS:

This combined Transmittal of Appeal Brief to the Board of Patent Appeals and Interferences and petition for extension of time under 37 CFR 1.136(a) is respectfully submitted by the undersigned:

Signature

Dated: **January 6, 2005**

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IN THE UNITED STATES PATENT & TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appl. No.:	**09/502,233**
Appellant:	**Chrysanne DiMarco et al.**
Filed:	**February 11, 2000**
Title:	**A METHOD AND APPARATUS FOR AUTHORING OF CUSTOMIZABLE MULTIMEDIA DOCUMENTS**
Art Unit:	**2178**
Examiner:	**BASEHOAR, Adam L.**
Docket No.:	**67685/00006**

Board of Patent Appeals and Interference
US Patent and Trademark Office
PO Box 1450
Alexandria, Virginia 22313-1450

BRIEF ON APPEAL

I. INTRODUCTION

This is an appeal from the Final Office Action of the Examiner dated February 4, 2004 rejecting claims 13-24. A Notice of Appeal from the Primary Examiner to the Board of Patent Appeals and Interferences with an extension of time was filed with the Office on July 6, 2004.

II. REAL PARTY IN INTEREST:

The real party in interest is in the present application is Chrysanne DiMarco et al.

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III. RELATED APPEALS AND INTERFERENCES:

There are no related appeals or interferences in respect of the present application known to the Appellant or Appellant's representative which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

IV. STATUS OF CLAIMS:

In this application, claims 1 – 12 have been canceled. Claims 13 – 24 are pending and are part of the present appeal. Claims 13-24 have been rejected. Please see Appendix A for a complete listing of the claims involved in this appeal.

V. STATUS OF AMENDMENTS:

There has been no amendments filed with the Office subsequent to the final rejection.

VI. SUMMARY OF INVENTION:

The present invention provides a system and method for creating a customized document having a subset of a fixed set of information. The system has a collection of elements 12 which represent the fixed set of information and these elements are arranged hierarchically in tiers. The tiers are arranged such that a first tier type has a set of elements which indicate components that are to be used to create the customized document and a second tier type interleaved with the first tier type that have a set of elements indicative of variations of the components of the first tier type. Each element of a lower tier is connected to at least one element of a higher tier wherein the elements of at least one of the tiers has a set of parameters associated therewith.

The system also has a selection engine 18 for receiving a set of parameters associated with an intended recipient of the customized document. The selection engine is operable upon the elements of the tiers in a sequential manner from the highest tier down, to apply the received parameters for selecting a subset of the elements to form the customized document.

The present invention also provides a method for creating a customized document which has a fixed set of information comprising the steps of establishing a collection of elements 12 which represent the fixed set of information, arranging the elements hierarchically in tiers as described above, associating a set of parameters with the elements of at least one of the tiers, receiving a set of parameters associated with an intended recipient of the customized document and operating upon the elements of each tier is a sequential manner from the highest tier down to apply the received parameters for selecting a subset of the elements to form the customized document.

VII. THE FINAL REJECTION:

Claims 13-24 are pending in this application and do not stand allowed.

In the Office Action dated February 4, 2004, the Examiner rejected claims 13-24 under 35 U.S.C. 103(a) as being unpatentable over "DiMarco, Chrysanne; Hirst, Graeme; Wanner, Leo; and Wilkinson, John. 'HealthDoc: Customizing patient information and health education by medical condition and personal characteristics.' *Workshop on Artificial Intelligence in Patient Education*, Glasgow, August 1995, http://www.cs.toronto.edu/compling/Publication" (hereinafter DiMarco et al.).

The Examiner has stated in the Office Action that DiMarco et al. teaches a system and method for the creation of customized patient material using patient information and cites various sections in DiMarco et al. to find equivalence and where an equivalent was not considered has regarded that element as obvious. The Examiner has also stated that the Appellant's arguments filed on November 13, 2003 have been fully considered but are not persuasive. The Appellant respectfully disagrees with the Examiner's rejection.

VIII. ISSUES:

The issue on appeal in this matter is whether claims 13–24 are unpatentable under 35 U.S.C. 103(a) over DiMarco et al.

IX. GROUPING OF CLAIMS:

The rejection pertains to Claims 13-24 in which Claims 13-18 are to a system for creating a customized document and Claims 19-24 are to a method of the same. Claims 13 and 19 are independent claims to which the arguments set forth below are directed towards. However, the Appellant considers the claims to be separately patentable and as such respectfully submits that the claims do not stand or fall together.

X. APPELLANT'S ARGUMENT:

The following arguments are to the rejections set forth in the Final Office Action dated February 4, 2004.

The Examiner has rejected claims 13-24 under 35 U.S.C 103(a) as being unpatentable over DiMarco et al.. The Appellant believes that although DiMarco et al. describes various components that would be useful in implementing a customizable document generation system, DiMarco et al. does not teach the interconnections of these components and hence a functional description of how to implement the system. In fact, there are several passages from DiMarco et al. which bear evidence of an incomplete system.

Section 3.2 of DiMarco et al. under the heading **Goals of the present project** outlines what is intended to be accomplished and what is inherently beyond the scope of the project. It is stated that:

"The creation of a complete system as just described is well beyond the scope and resources of the HealthDoc research project. The project is concentrating primarily on

the research problems in computational linguistics that are entailed by the development of such a system..." [emphasis added].

The above passage, an excerpt from the goals of the project, provides specific evidence that the teachings of DiMarco et al. have identified a problem and some required components, but lack the interconnections necessary to provide a complete system.

In the same paragraph, DiMarco et al. continues by saying: "Thus the project does not include development of the delivery system". It is clear that DiMarco et al. does not teach a principled, reproducible system for specifying a master document and creating customized documents. Further evidence can be found in section 9 under the heading **Refinement of the generation paradigm** as a conclusion given by DiMarco et al. to what has been stated above.

The Examiner has made several indications that features not disclosed in DiMarco but recited in claim 13 would have been obvious. The Appellant respectfully disagrees. Although some of the elements recited in claim 13 were generally described by DiMarco et al., the interconnections, structure, and function of the system as recited in claim 13 have not been taught. Therefore what was lacking in DiMarco et al. is the true nature of the present invention.

In the Examiner's rejection of claim 13, he has identified two features of claim 13 which DiMarco et al. do not teach. These features are as follows:

1. DiMarco et al. do not teach that elements are arranged in a tiered hierarchy system.
2. DiMarco et al. do not teach that the selection engine work from the highest element down to apply the patient parameters.

1. Hierarchical Tiers

The Examiner has concluded that it would have been obvious to one skilled in the art to have ordered the elements in hierarchical tiers because if the elements were on the same level then repair processing would result in unnecessary processing and delay, in that a variation

change applied at the word level could occur before a paragraph variation change that when it's change occurred would no longer need the previously changed word, rendering it unnecessary. The Examiner further concludes that for these reasons it would also be obvious that each lower level would be connected to a higher level.

The Examiner has stated that it would be obvious to arrange the elements in hierarchical tiers for reasons relating to the repair processing of words and paragraphs. In claim 13 however, the hierarchical tiers are arranged in a first and a second tier type of which the first tier type comprises a set of elements indicating components (i.e. words, paragraphs etc.) and the second tier type interleaved therewith comprises a set of elements indicative of variations of the elements of the first tier. According to the Examiner, the hierarchy only exists between elements such as paragraphs and words, when in fact claim 13 requires the hierarchy to exist not only within the elements which indicate components but also elements which indicate variations in these components. The Examiner appears to have misconstrued what the elements represent and has applied hindsight in his determination that the hierarchical tier-types recited in claim 13 are an obvious solution.

Although the elements are fixed sets of information, elements in a first tier represent components which may include paragraphs and words and elements in the second tier indicate variations of the components of the first tier. The components are therefore not only tiered themselves but are part of one tier type interleaved with another tier type that indicates the arrangement of these components.

Therefore the Examiner's view that the hierarchical system is obvious does not address the fact that the hierarchy not only involves the hierarchy of elements, but that there are separate tier types which are interleaved. In fact, the Examiner has in hindsight, found this distinction obvious in view of DiMarco without fully appreciating the nature of that distinction. In this structure, variations of the components indicated by the tiered elements can be chosen, thereby providing a solution to how a customized document can be created.

According to section 2143 of the Manual of Patent Examining Procedure (MPEP) there

are three basic criteria in establishing a *prima facie* case of obviousness, namely:

a) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings
b) there must be a reasonable expectation of success
c) the prior art reference (or references when combined) must teach or suggest all the claim limitations

i) Does DiMarco et al. have motivation to adapt a tiered hierarchy of two interleaved tier-types?

DiMarco et al. clearly states, as mentioned above, that the project which is the subject of the paper does not include the development of the delivery system and that the creation of a complete system is well beyond the scope of the project. Whilst the DiMarco et al. paper may suggest that a delivery system is desirable, there is no suggestion or hint in the paper of the nature of that system or the use of tiers as claimed, or the organization of tiers, as claimed. On the contrary, DiMarco et al. indicates in the paper that the solution is not known to them and is beyond the scope of the project. Thus the only motivation provided by DiMarco et al. is to embark on a new project to develop a delivery system, but is entirely lacking any motivation to adapt a tiered hierarchical structure, as evidenced by the fact that there is not even a suggestion that it would be a possible solution. This also indicates that the general knowledge available to one of ordinary skill in the art is lacking because if the common knowledge had indicated or suggested that an interleaved tiered hierarchical adaptation was obvious, then clearly DiMarco et al. would have adapted such a solution. The Examiner's conclusion of obviousness is based on hindsight. Therefore, criteria a) has not been met by the Examiner in his finding of obviousness.

ii) Does DiMarco et al. provide a reasonable expectation of success?

Criteria b) requires that there must be a reasonable expectation of success. DiMarco et al. explains that the solution to the problem, which according to claim 13 includes the hierarchical

tiers, is beyond the scope of the project and thus there is no teaching in DiMarco et al. that would provide a reasonable expectation of success. A skilled workman reading DiMarco would in fact find that the solution to the problem can not be found therein and therefore it would not be obvious to incorporate an unknown solution, namely incorporating a hierarchical tier structure because the teachings to do so do not even exist. DiMarco et al. therefore does not suggest a line of enquiry with a reasonable expectation of success, but rather explicitly states that a new, undefined project must be undertaken before there can be any line of enquiry. Therefore criteria b) has also not been met.

iii) Does DiMarco et al. teach or suggest all the claim limitations

According to criteria c), the prior art reference must teach or suggest all the claim limitations. The Examiner has identified that the prior art reference does not teach hierarchical tiers however has found this limitation to be obvious. There is clearly a distinction between what has been recited in claim 13 and what was taught in DiMarco et al. The adaptation of hierarchical tiers has not been taught nor suggested by DiMarco et al. Such an adaptation would have provided a solution if in fact DiMarco et al. had known to do so. However, such an analysis is clearly ex post facto and can only be supported by the magnifying spectacles of 20/20 hindsight. DiMarco et al. therefore clearly does not teach all the claim limitations and criteria c) has not been met in the Examiner's determination of obviousness.

The Examiner's own analysis of the teachings of DiMarco supports a conclusion of non-obviousness as the arrangement suggested by the Examiner is not that claimed! There is no suggestion in the Examiner's analysis that the tiers of elements would be interleaved with tiers of variations, as claimed, and without an explicit showing of this feature the claim is neither anticipated nor rendered obvious.

It is therefore believed, in view of the foregoing, that it would not be obvious to have incorporated a tiered hierarchy of elements in view of DiMarco et al. Each of the criteria required by section 2143 of MPEP has not been met by the Examiner in his determination of obviousness and the nature of the tiers and the elements associated therewith have been

misconstrued.

2. Selection Engine Working Sequentially From Highest Tier Down

The Examiner has concluded that it would be obvious that the selection engine work from the highest element down to apply the patient parameters in view of his conclusion that it would be obvious to utilize a hierarchy of tiers. The Examiner has equated the selection engine recited in claim 13 with Figure 1 of DiMarco. In Figure 1 of DiMarco, a box labeled "Selection of Content" represents a process for choosing the content to place in the customized document.

i) Does DiMarco et al. have motivation to adapt a selection engine to work sequentially?

The selection engine is adapted to work on the hierarchical tiers in a specific manner, namely to work sequentially from the highest tier down. The Examiner has thought this obvious in view of his finding that the hierarchical tiers are obvious. Again, therefore this is based on hindsight, rather than the teachings of the reference. It would therefore follow from the above arguments that there would be no suggestion or motivation in DiMarco et al. to adapt such a selection engine. The common general knowledge is also lacking since the successful operation of the selection engine requires knowledge of how the elements are structured, interrelated, and how they should be chosen. Therefore criteria a) has not been met in the Examiner's finding of obviousness.

ii) Does DiMarco et al. provide a reasonable expectation of success?

DiMarco et al., when read as a whole, clearly does not provide a reasonable expectation of success. The reference makes it clear in section 9 that the problems faced in planning and repairing sentences is significant and continuously evolving. Among the "open" questions posed in the final portion of section 9 is "what is the best architecture". As this is open, it can hardly lead to a determination of reasonable expectation of success from adoption of the structure specifically claimed. The proposal of the problem with an indication that the solution is beyond

the scope is believed to confirm the failure in meeting the requirements of criteria b) described above. This follows the above arguments regarding the tiered hierarchy since the selection engine is adapted to utilize such a structure. Therefore criteria b) has not been met in the Examiner's finding of obviousness.

iii) Does DiMarco et al. teach or suggest all the claim limitations

According to criteria c) all claim limitations must be taught by the prior art. The Examiner has indicated that the box in Figure 1 labeled "Selection of Content" would render the selection engine of claim 13 obvious. The process represented by the box in Figure 1 does not describe the nature of the process but merely shows, at the highest level possible, that in the flow of the system, a process is required to select the content. It can not reasonably be said that a skilled workman looking at Figure 1 would come to a conclusion that it would be obvious to choose the content by applying received parameters in a sequential manner from the highest tier downward. In addition to the arguments above regarding the hierarchical structure, DiMarco et al. does not in fact teach all the limitations of the selection engine recited in claim 13. Therefore criteria c) has not been met in the Examiner's finding of obviousness.

Therefore the Examiner's conclusion that it be obvious to have a selection engine apply received parameters in a sequential manner does not meet the requirements for obviousness according to section 2143 of MPEP.

XI. CONCLUSION:

In summary, the Appellant respectfully submits that the Examiner has erred in his rejection of claims 13-24 as being unpatentable over DiMarco et al. when the latter reference is not only missing several of the elements of the claimed invention but in fact specifically states therein that the implementation of a customizable patient information system is beyond the scope of the subject matter of the article.

The Examiner's view that the hierarchical system is obvious does not address the fact that

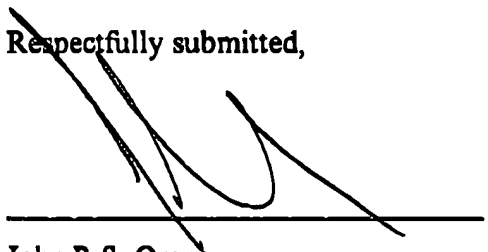
the hierarchy not only involves the hierarchy of elements, but that there are separate tier types which are interleaved. It is believed that the Examiner has misconstrued the hierarchical ordering of elements into tiers and has failed to identify that the hierarchical structure recited in claim 13 in fact has two tier types which are interleaved together. In fact, the Examiner has in hindsight, found this distinction obvious in view of DiMarco without fully appreciating the nature of that distinction.

Each of the requirements of section 2143 of MPEP have not been met by the Examiner in his determination of obviousness. It is believed that a skilled workman would not have the general knowledge or receive motivation from DiMarco et al., would not be ensured of any reasonable expectation of success based on the content of DiMarco et al. and would not find all elements in DiMarco et al. required to arrive at what has been recited in claim 13.

Accordingly, it is believed that Claim 13 clearly and patentably distinguishes over DiMarco et al. and is in condition for allowance. Claims 14-18 are also believed to distinguish over DiMarco et al. through their dependencies upon Claim 13. Claim 19 is a method to the system described in Claim 13 and as such, similar arguments apply. Claims 20-24 are also believed to distinguish over DiMarco in their dependencies upon Claim 19.

The Appellant respectfully requests that this honourable Board of Patent Appeals and Interferences reverse the Examiner's decision in this case and indicate the allowability of claims 13-24 in this application.

Respectfully submitted,



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APPENDIX A:

Listing of the claims involved in the appeal:

13. A system for creating a customized document comprising a subset of a fixed set of information, said system comprising:

a) a collection of elements representing said fixed set of information, said elements being arranged hierarchically in tiers arranged in a first tier type comprising a set of elements indicating components and a second tier type interleaved therewith comprising a set of elements indicative of variations of said components, such that each element of a lower tier is connected to at least one element of a higher tier, the elements of at least one of said tiers having a set of parameters associated therewith; and

b) a selection engine to receive a set of parameters associated with an intended recipient of the customized document, said selection engine being operable upon elements of said tiers sequentially from the highest tier down to apply the received parameters and thereby select a subset of said elements to form the customized document.

14. A system according to claim 13, wherein each of said variant tiers has a set of parameters associated therewith.

15. A method according to claim 14, wherein said selection engine selects one variation for each selected component, so that said parameters associated with said one selected variation are in accordance with said received parameters.

16. A system according to claim 13, wherein said elements comprise content to be included in said document by said selection engine and computer parameters to be executed by said selection engine.

17. A system according to claim 13, wherein said hierarchy comprises objects arranged in classes and said selection engine being instantiated from said elements.

18. A system according to claim 13, wherein said hierarchy provides a grammar.

19. A method for creating a customized document comprising a subset of a fixed set of information, said method comprising the steps of:

a) establishing a collection of elements representing said fixed set of information;

b) arranging said elements hierarchically in tiers arranged in a first tier type comprising a set of elements indicating components and a second tier type interleaved therewith, said second tier type comprising a set of elements indicative of variations of said components, such that each element of a lower tier is connected to at least one element of a higher tier;

c) associating a set of parameters with the elements of at least one of said tiers;

d) receiving a set of parameters associated with an intended recipient of the tailored document;

e) operating upon elements of each tier sequentially from the highest tier down to apply the received parameters and thereby select a subset of said elements comprising the tailored document.

20. A method according to claim 19, wherein each of said variant tiers has a set of parameters associated therewith.

21. A method according to claim 20, wherein said operation on each tier selects one variation for each selected component, so that said parameters associated with said one selected variation are in accordance with said received parameters.

22. A method according to claim 19, wherein said elements comprise content to be included in said document by said selection engine and computer parameters to be executed by said selection engine.

23. A method according to claim 19, wherein said hierarchy comprises objects arranged in classes, whereby said operation uses a selection engine instantiated from said elements.

24. A method according to claim 19, wherein said hierarchy provides a grammar.